

- 1 1. In an multi-protocol label switching system (MPLS) having a working path over which
2 data is carried from a source to a destination and further having a protection path over
3 which data from said source to said destination can be carried, a method of initiating an
4 MPLS protection path switch over from said working path to said protection path
5 comprising the steps of:
 - 6 a. detecting a failure on said working path at a first switching node of said working
7 path;
 - 8 b. transmitting a failure notification message from said first switching node to at
9 least a second, switching node of said working path;
 - 10 c. routing data from said working path to said protection path upon the receipt of
11 said failure notification message at at least one of: said second switching node and
12 a third switching node of said working path.
- 13 2. The method of claim 1 further including the step of re-routing data from said protection
14 path to said working path upon the determination that said failure on said working path
15 has been corrected.
- 16 3. The method of claim 1 wherein said failure notification message travels along a path
17 through said MPLS system, extending between said destination and said source.
- 18 4. A multi-protocol label switching (MPLS) system protection switch, said MPLS switch
19 comprised of:

3 a data input port into which MPLS data is received from a data source;
4 a first data output port from which MPLS data is sent to a second MPLS
5 switching system comprising an MPLS working path;
6 a second data output port from which MPLS data is sent to a third MPLS
7 switching system comprising an MPLS protection path;
8 whereby data received at said data input port from said data source can be
9 selectively routed from said second MPLS switching system to said third MPLS
10 switching system.

5. The MPLS switching system of claim 4 further comprising a control input port whereat
protection path failure messages are received from at least one said second MPLS
switching system and said third MPLS switching system.

6. A multi-protocol label switching (MPLS) system comprised of:

a first MPLS protection switch having a data input port into which MPLS data is
received from a data source;

a second MPLS switching system coupled to said first MPLS protection switch
via a first data path carrying MPLS data, said first data path comprising an MPLS
working path;

a third MPLS switching system coupled to said first MPLS protection switch via a
second data path capable of carrying MPLS data, said second data path comprising an
MPLS protection path

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